

THAT WHICH IS CLAIMED IS:

1. Integrated circuit (106;106') made from semiconductor material, capable of storing data in digital format, particularly for application in a memory card which can be associated for operation with
5 an external acquisition system and an external processing system, comprising:

input/output means (2',114',7',122) for receiving the data from the external acquisition system or from the external processing system, for sending the
10 data to the external processing apparatus and for receiving a digital circuit-command signal from the said system and from the said apparatus;

an electrically programmable non-volatile memory (101) for storing the said digital data,
15 comprising a first terminal (133) for an electrical programming signal capable of enabling the storage of the data available in the said input/output means and a second terminal (131) for an electrical read signal capable of enabling the output of the data from the
20 memory to make them available in the input/output means;

memory control means (111) connected to the said first and second terminals and to the said input/output means for generating the electrical
25 signals for programming and reading the memory from the said command signal;

characterized in that the said memory is of the type which can be erased by exposure to electromagnetic radiation, particularly ultraviolet
30 radiation, to permit the non-electrical erasure of the stored data.

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2. Circuit according to Claim 1, characterized in that it is formed on a single chip of semiconductor material.

3. Integrated circuit according to Claim 1, characterized in that the said memory is an EPROM (Erasable Programmable Read Only Memory).

4. Integrated circuit according to Claim 1, characterized in that the said memory has a multi-level architecture.

5. Integrated circuit according to Claim 1, characterized in that the said memory comprises a memory cell including a MOS transistor with floating gates.

6. Integrated circuit according to Claim 1, characterized in that the said memory comprises a plurality of memory locations with which addresses are associated, and in that the said input/output means are
5 used to receive, and make available to the memory, address signals (130') for the selection of the locations of the said plurality in which data in digital format are to be stored, or from which the stored data are to be read.

7. Integrated circuit according to Claim 6, characterized in that the said control means comprise:
an additional memory (112) connected for operation to the said memory and capable of storing a
5 plurality of microinstructions for the control of the said memory;

comprise first serial/parallel conversion means (109)
connected to the said first line and to the said
5 decoder means for the serial/parallel conversion of the
said digital command signal.

13. Integrated circuit according to Claims 7
and 11, characterized in that the said control means
comprise second serial/parallel conversion means (113)
connected to the said second line and to the said
5 memory for the serial/parallel conversion of the said
data and addresses.

14. Integrated circuit according to Claim
13, characterized in that it also comprises bypass
means (154,150) which can be selectively activated and
are connected for operation to the first
5 serial/parallel conversion means to bypass the said
decoder means and the said additional memory in such a
way that a plurality of microinstructions, supplied to
the said first line and leaving the said first
serial/parallel conversion means, is supplied directly
10 to the said memory.

15. Integrated circuit according to Claim
14, characterized in that the said bypass means
comprise switching means (150) provided with an output
(116'') connected to the said memory and capable of
5 assuming a first operating state corresponding to the
connection of the said output to the said additional
memory and a second operating state corresponding to
the connection of the said output to the said first
serial/parallel conversion means.

16. Integrated circuit according to Claim 15, characterized in that the said switching means are provided with command means (151) to command the switching of the switching means between the said first
5 and second operating states.

17. Memory card (100) for storing data in digital format, which card can be associated for operation with an external acquisition system for receiving and storing data, and with an external
5 processing apparatus for making the stored data available to the said processing apparatus, the said memory card comprising:

an outer casing (102) incorporating an integrated circuit (106) made from semiconductor
10 material capable of storing the said data;

a non-volatile electrically programmable memory (101) integrated in the said circuit;

characterized in that the said memory is of the type that can be erased by exposure to an external
15 source of electromagnetic radiation of suitable wavelength, particularly ultraviolet radiation, and in that the said casing is provided, at the position of the memory, with means (103) transparent to the said electromagnetic radiation.

18. Memory card according to Claim 17, characterized in that the said transparent means comprise an aperture in the said casing placed at the position of the said memory.

19. Memory card according to Claim 18, characterized in that the said aperture is associated

with a means transparent to the electromagnetic radiation for protecting the memory, particularly
5 polyaniline.

20. Memory card according to Claim 17, characterized in that it also comprises reversible means of closing the said aperture to protect the memory from electromagnetic radiation which could cause
5 its undesired erasure.

21. Memory card according to Claim 20, characterized in that the said reversible closing means comprise an adhesive element which can be removably associated with the casing at the position of the said
5 aperture.

22. Memory card according to Claim 17, characterized in that the said integrated circuit is made in accordance with any one of Claims 1 to 16.

23. System (200) for the acquisition of sounds/images, comprising:

transducer means (210) capable of generating an analog electrical signal from the said
5 sounds/images;

analog/digital conversion means (220) capable of converting the said analog electrical signal into data in digital format;

a memory card (100) which can be removably
10 associated with the said system and can be connected for operation to the said conversion means for storing the said data;

characterized in that the said memory card is

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made in accordance with any one of Claims 17 to 22.

24. Process for storing data in digital format in a memory card by means of a system for acquiring sounds/images, the said process comprising the steps of:

5 converting the said sounds/images into an analog electrical signal;

 converting the said analog electrical signal into data in digital format;

10 transferring the said data in digital format into a memory card;

 characterized in that the said memory card is made in accordance with any one of Claims 17 to 22.

25. Adapter device (300;400) for interfacing a memory card for storing data in digital format according to any one of Claims 17 to 22 with a processing apparatus comprising:

5 a casing (302,303) which houses the memory card and which is provided with electrical terminals for connection to the said card;

10 interfacing means (307;451) connected to the said electrical terminals for interfacing with the said processing apparatus, capable of transferring the said data to the processing apparatus;

 characterized in that it comprises:

15 an activatable source of electromagnetic radiation (304,305) of suitable wavelength, particularly ultraviolet radiation, positioned in such a way that the said memory card is struck by the said radiation to erase the digital data stored in the card when the card is inserted into the adapter device.

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26. Adapter device according to Claim 25, characterized in that the said radiation source comprises a lamp (304) supplied with electrical voltage and capable of emitting ultraviolet radiation.

27. Adapter device according to Claim 25, characterized in that it comprises reflective means (306,306';408) capable of guiding the said radiation towards the said memory card.

28. Adapter device according to Claim 25, characterized in that the said device is capable of being inserted into a socket of the said processing apparatus.

29. Adapter device according to Claim 28, characterized in that the said device is made in accordance with the PCMCIA-JEIDA standard.

30. Adapter device (400) according to Claim 25, characterized in that the said device is external to the said processing apparatus.

31. Adapter device according to Claim 30, characterized in that it comprises signaling means (406,407) capable of signaling the operating state of the said device.

32. Adapter device according to Claim 25, characterized in that the said interfacing means are provided with a plug (403) capable of being connected to a USB (Universal Serial Bus) port (404) of the said
5 processing apparatus.

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